## AMENDMENTS TO THE SPECIFICATION

At page 1, starting at paragraph 1, line 5 and continuing to paragraph 2, line 15, please change to read as follows:

The present invention relates to a synchronization detecting apparatus for a wireless signal transmission line, which is comprised by a CDMA (Code Division Multiple Access) system receiver.

**Description of the Related Art**

A CDMA system attempts to improve its reception quality by using RAKE reception, which is path diversity (plus space diversity reception (antenna diversity reception)). In a signal format of a W-CDMA (Wideband Code Division Multiple Access) system, a synchronization signal (Sync Word: hereinafter referred to simply as an SW) for detecting synchronization is multiplexed on a pilot signal, and the SW is demodulated by a receiver to detect synchronization. The RAKE receiver makes estimation (channel estimation) for the state of a propagation path by using a pilot signal included in a reception signal containing a lot of noise, makes synchronization detection, and the synthesizes paths so as to demodulate data.

At page 2, paragraph 3, line 14, please change to read as follows:

A signal input from an antenna 10 is converted into baseband signals by a demodulating unit 11, and these signals are further converted into digital signals by A/D converters 12-1 and 12-2. The converted signals are input to a despreading unit 13. Here, a CDMA despreading process is performed, and the despread signals are input to a synchronization detecting circuit 14-1 for demodulating data and a synchronization detecting circuit 14-2 for demodulating an SW. In ~~Fig.15~~ Fig. 1, there are two systems of the synchronization detecting circuits 14-1 and 14-2 and channel estimating circuits 15-1 and 15-2, and a plurality of fingers are shown as a CDMA RAKE receiver. After a maximum ratio synthesizing unit 16-1 synthesizes the outputs of the fingers, an error correcting unit 17 performs an error correction process for the synthesized output. The data is then output. Similarly, after a maximum ratio synthesizing unit 16-2 synthesizes the outputs of the synchronization detecting circuit 14-2 for demodulating an SW at a

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maximum ratio, a synchronization detecting unit 18 performs a synchronization detection process for the synthesized output to determine synchronization.

**At page 5, line 23 to page 6, line 6**

As described above, the SW error rate [[is]] may not ~~deteriorated~~ deteriorate even ~~if the though~~ reception quality is bad. If a process is being performed based upon the SW error rate the process could continue even though ~~in the belief of this phenomenon, it is determined that an SW is correct and a misunderstanding such that a communication is being made arises, although~~ radio waves are not being transmitted from a portable terminal ~~(the reception quality should be the worst because only noise is input), and only noise is input from an antenna.~~

**At page 6, line 9 to page 7, line 7**

~~An object of the present invention is to provide a synchronization detecting apparatus that is not affected by a channel estimation result.~~

A synchronization detecting apparatus according to the present invention, ~~which~~ detects synchronization by using a pilot signal. The pilot signal includes a plurality of bits and at least one specific bit of said plurality of bits is used as a synchronization signal. ~~on which a synchronization signal is multiplexed, comprises~~ The synchronization detecting apparatus includes a channel estimating unit making channel estimation by using the pilot signal from which ~~at least the synchronization signal~~ a predefined part of the pilot signal is removed; and a synchronization signal demodulating unit demodulating each bit of the synchronization signal by using a result of the channel estimation.[[, wherein]] The above predefined part is defined for each target bit of the synchronization signal to be demodulated and is defined so as to include the target bit; and synchronization detection is made by using the demodulated synchronization signal.

~~According to the present invention, the correlation between a result of channel estimation using a pilot signal and a synchronization signal becomes weak, thereby accurately detecting the presence/absence of a synchronization signal even when noise is mainly received in a non-communication state, etc.~~

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~~Accordingly, a base station can always detect that a portable terminal terminates its communication. As a result, wastage such that an unnecessary channel is occupied does not occur.~~

**At page 12, paragraph 1, lines 3 and 4, please change to read as follows:**

As shown in this figure, 2 conventional channel estimating circuits 20 for detecting synchronization and for demodulating data are put into one for common use, thereby reducing the circuit scale. As a result, use, thereby reducing the circuit scale. As a result, a signal received by an antenna 21 is converted into complex baseband signals I (in-phase) and Q (quadrature phase), which are then converted into digital signals via A/D converters. The converted digital signals are despread by fingers, and channel-estimated by the channel estimating unit. Then, synchronization detection is made by using a channel estimation value, which is a result of the channel estimation, and a data signal and a synchronization signal are synthesized at a maximum ratio by maximum ratio synthesizing units 23-1 and 23-2. Thereafter, the data signal is error-corrected and results in a data output, whereas the synchronization signal is synchronization-detected and results in a synchronization output.

**At page 18, paragraph 5, line 22, please change to read as follows:**

If the correlation between a channel estimation value and an SW is strong, an SW does not become erroneous even if no reception signal exists. A diversity gain is further expected at the time of RAKE reception. As a result, an error rate becomes lower, and the state is apt to become a synchronization state only with noise but with no signal. Therefore, as shown in Fig. 20, a finger(?) reliability degree detecting circuit is arranged, the degree of reliability of an output from each finger is detected, outputs of fingers with high degrees of reliability are synthesized at a maximum ratio for SW signal demodulation, and SW detection is made, so that a diversity gain is reduced in a state where there is no signal. Here, the degree of reliability of each finger is, for example, the strength of the correlation value output from each finger. It is determined that as the strength of the correlation value increases, so does the degree of reliability

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of reception. A finger with a high strength of the correlation value is selected, and the above described method is applied.

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